

configured to measure a relative position between the second measuring device and a second object; and

using a computer, determining a relative position between the first object and the second object based on a position of the first calibration target relative to the third measuring device, the relative position between the first measuring device and the first object, and the relative position between the second measuring device and the second object.

C1
end
Sub
D1

22. (Amended) A method as recited in Claim 21, including selecting each measuring

device from a group consisting of

an image-capturing device configured to capture images of an object;

a gravity gauge configured to detect movement of one or more other measuring devices

with respect to another measuring device or with respect to a fix point;

a string gauge configured to detect movement of one or more other measuring devices

with respect to another measuring device or with respect to a fix point;

a light source located near one measuring device to direct a light beam at a detector.

C2
Sub
D1

34. (Once Amended) A method for calibrating a machine measuring system that has a

first measuring device and a second measuring device, the method comprising the steps of:

mounting a first calibration target in a predetermined relationship to the first measuring device of the machine measuring system;

mounting a third measuring device in a predetermined relationship to the second measuring device of the machine measuring system; and

C3
Sub
D1
Cont'd

C3
end
Sub
D1

using a computer, calculating a relative measuring-device position value of the machine measuring system representing the position of the first measuring device relative to the second measuring device based on a position of the first calibration target relative to the third measuring device, wherein each of the first measuring device, the second measuring device, and the third measuring device is an image-capturing device that performs measurements of objects by capturing images.

C4

Sub,
D

38. (Twice Amended) A method for measuring the relative positions of a first device relative to a second device, the method comprising the steps of:

- mounting near the first device a calibration device in which the position of the calibration device relative to the first device is predetermined;
- mounting near the second device a calibration target in which the position of the calibration target relative to the second device is predetermined;
- measuring the position of the calibration device relative to the calibration target;
- accessing computer-stored data related to the position of the calibration device relative to the first device and the position of the calibration target relative to the second device; and
- using a computer, determining the position of the first device relative to the second device based on:

- the position of the calibration device relative to the first device;
- the position of the calibration target relative to the second device; and
- the position of the calibration device relative to the calibration target.

Please add new claims 46-50 as follows:

46. (NEW) A method for calibrating a machine measuring system that has a first measuring device and a second measuring device, wherein a first calibration device is in a first known positional relationship relative to the first measuring device, and a second calibration device is in a second known positional relationship relative to the second measuring device, the first calibration device and the second calibration device are used to measure a relative position of the first calibration device relative to the second calibration device, the method comprising the machine-implemented steps of:

receiving a signal representing a relative position between the first calibration device and the second calibration device, wherein the relative position between the first calibration device and the second calibration device is measured by the first calibration device and the second calibration device;

accessing data representing the first known positional relationship and the second known positional relationship; and

calculating a relative position between the first measuring device and the second measuring device based on the signal representing the relative position between the first calibration device and the second calibration device, the first known positional relationship and the second known positional relationship.

47. (NEW) A method as recited in claim 46, wherein the first measuring device, the second measuring device, the first calibration device or the second calibration device are selected from a group consisting of: an image-capturing device, a gravity gauge configured to detect

movement of an object, a string gauge configured to detect movement of an object, and a light source configured to direct a light beam at a detector.

48. (NEW) A method as recited in claim 46, further including the steps of:

storing a value that represents the relative position between the first calibration device and the second calibration device as a calibration value;

periodically receiving a signal representing a new value that represents the relative position between the first calibration device and the second calibration device; and

raising an alert alarm in response to the calibration value differing from the new value beyond an acceptable amount.

49. (NEW) A method as recited in claim 46, wherein each of the first measuring device, the second measuring device, and the first calibration device is an image-capturing device that performs measurements of objects by capturing images.

50. (NEW) A method for calibrating a machine measuring system that has a first measuring device and a second measuring device, wherein a first calibration device is in a first known positional relationship relative to the first measuring device, and a second calibration device is in a second known positional relationship relative to the second measuring device, the first calibration device and the second calibration device are used to measure a relative position of the first calibration device relative to the second calibration device, the method comprising the machine-implemented steps of:

periodically receiving a signal representing a relative position between the first calibration device and the second calibration device, wherein the relative position between the

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first calibration device and the second calibration device is measured by the first calibration device and the second calibration device;

accessing data representing the first known positional relationship and the second known positional relationship; and

calculating a relative position between the first measuring device and the second measuring device based on the signal representing the relative position between the first calibration device and the second calibration device, the first known positional relationship and the second known positional relationship.